



*Supplement of*

## **Discrepancies between MICS-Asia III simulation and observation for surface ozone in the marine atmosphere over the northwestern Pacific Asian Rim region**

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## Supplemental Figures

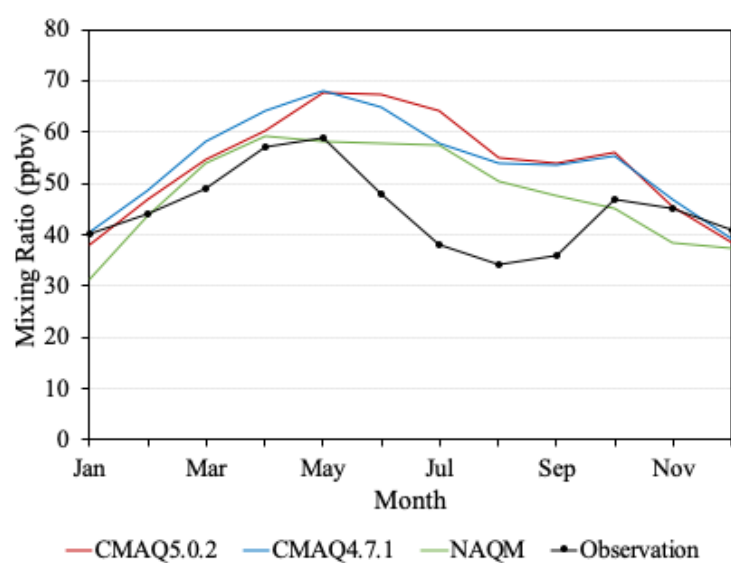


Fig. S1 Comparison of seasonal variation of O<sub>3</sub> at Oki in 2010 between the observation and model simulation by CMAQ v.5.0.2, CMAQ v. 4.7.1 and NAQM v.3.

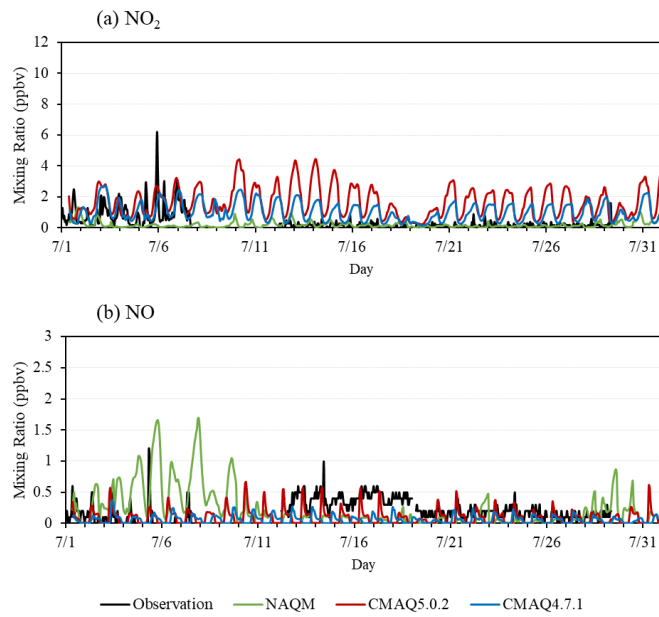


Fig. S5-1 (a) Mixing Ratios of  $\text{NO}_2^*$  by observation,  $\text{NO}_2$  by NAQM, CMAQ v.5.0.2, and CMAQ v. 4.7.1 at Hedo in July 2010. (b) Same as (a) but for NO.

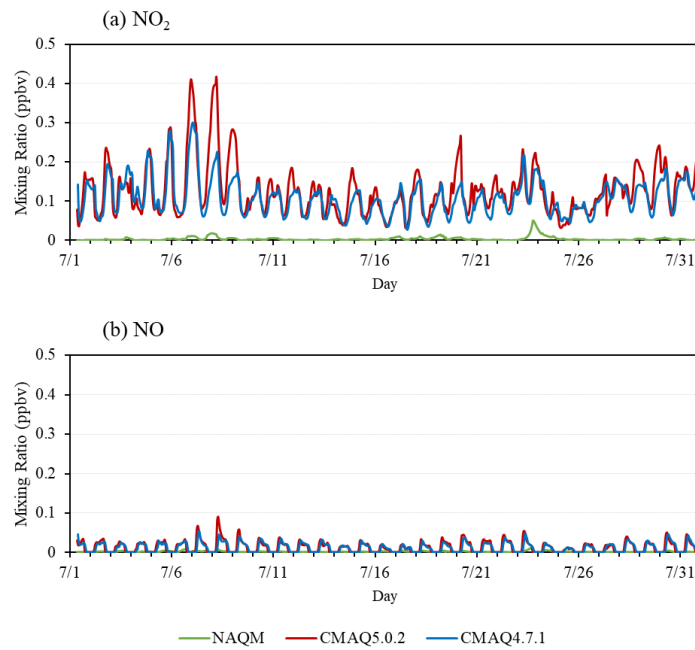
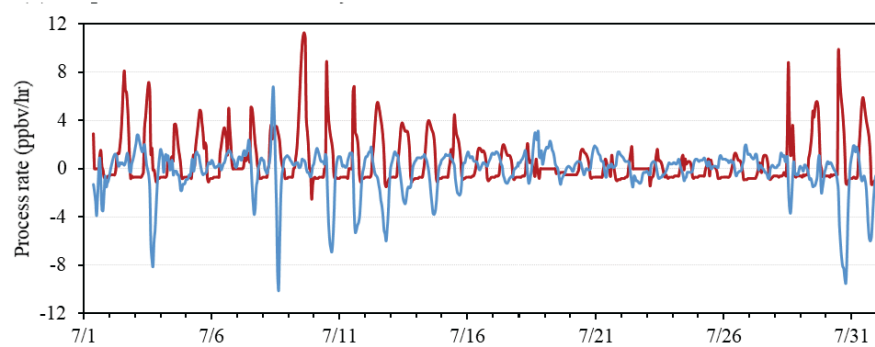


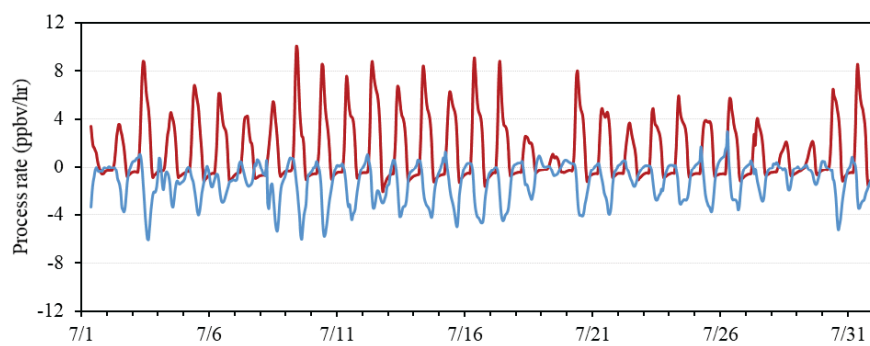
Fig. S5-2 (supplement) (a) Mixing Ratios  $\text{NO}_2$  by NAQM, CMAQ v.5.0.2, and CMAQ v. 4.7.1 at Ogasawara in July 2010. (b) Same as (a) but for NO.

(a) NAQM



(b) CMAQ v.5.0.2

5.0.2



(b) CMAQ v.4.7.1

7.1

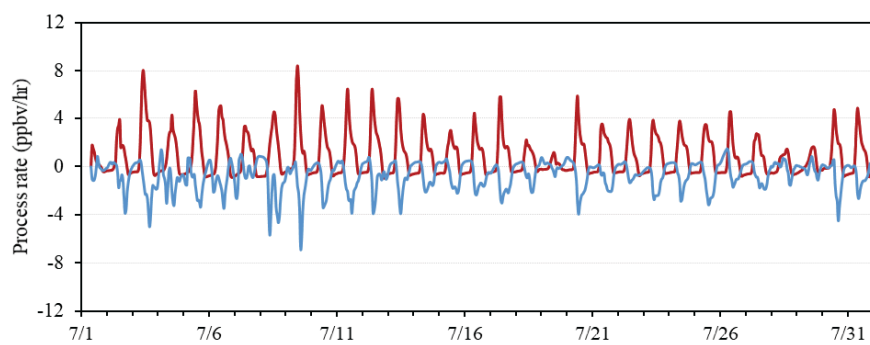


Fig. S6-1 Model-calculated net chemical production and net transport of  $O_3$  at Hedo in July 2010 by (a) NAQM, (b) CMAQ5.0.1 and (c) CMAQ 4.7.1.

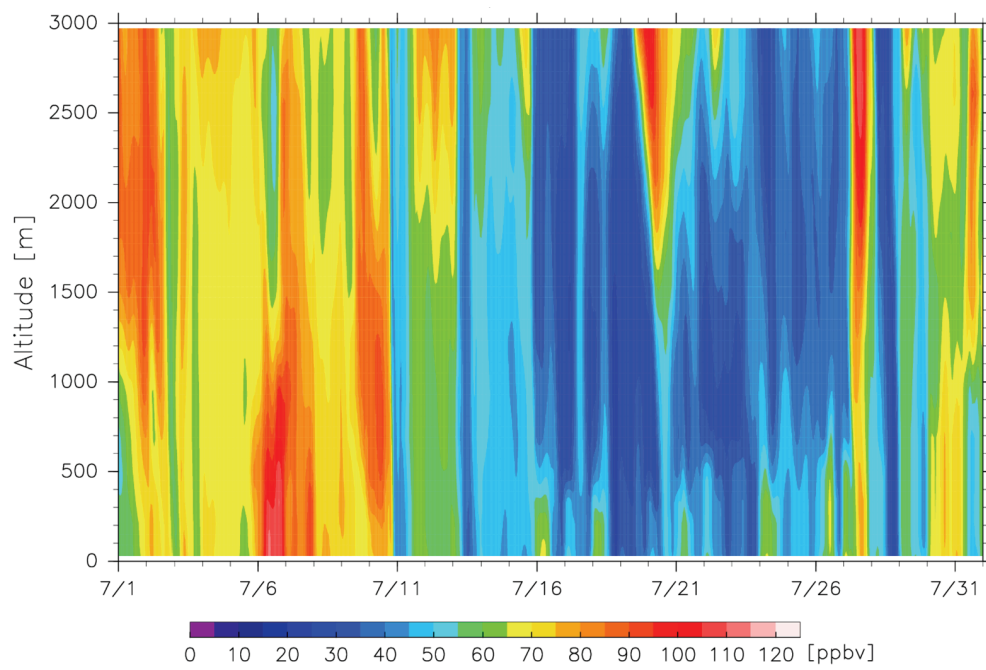


Fig. S6-2 Calculated vertical profile of O<sub>3</sub> at Oki in June, 2010.